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P/014/62/041/012/003/005
D204/D307

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TITLE: Stable urea-formaldehyde solutions

PERIODICAL: Przemys/ Chemiczny, v. 41, no. 12, 1962, 688-689

TEXT: The present paper is a review aimed at presenting the achievements attained in this field to Polish chemists, and motivated by the scarcity of more detailed publications dealing with this subject. Compositions, storage temperatures, temperatures at which the polymer is precipitated, stabilization and physical properties of urea-formaldehyde (u-f) solutions are summarized. 'Stable' solutions are defined as those in which the concentration is high, the stabilizing action being due to urea. The methods of preparation are briefly described under the general headings of: (a) reaction of solid urea with aqueous CH_2O, (b) absorption of gaseous CH_2O in hot, concentrated solutions of urea, and (c) preparing a hot concentrated CH_2O solution and mixing the latter with solid urea. The usual applications of u-f solutions are listed. Produc-

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tion and utilization of stable u-f solutions is recommended, in view of the considerable savings in transportation and storage costs, more efficient applications in the chemical industry and a saving of methanol (70-120 kg MeOH/ton of formalin) which is at present used to stabilize the solutions. Some Western-produced stable u-f solutions and concentrates are characterized. Research into the production and properties of stable u-f solutions has now been started at ZA Kędzierzyn [Abstracter's note: Zak/ady Azotowe (Nitrogen Works) Kędzierzyn]. There are 14 references: 3 Soviet-bloc and 11 non-Soviet-bloc.

ASSOCIATION: ZA Kędzierzyn

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